

FILE 'GENBANK' ENTERED AT 12:07:59 ON 23 APR 2001
L1 0 S (HUMAN CYCLIN A1 PROMOTER)
L2 1 S (HUMAN CYCLIN A1)

FILE 'MEDLINE' ENTERED AT 12:10:57 ON 23 APR 2001
E YANG R/AU
L3 514 S E3-E22
L4 7 S L3 AND (CYCLIN A1)
L5 4 S L4 AND PROMOTER

L5 ANSWER 4 OF 4 MEDLINE
 AN 1999214202 MEDLINE
 DN 99214202 PubMed ID: 10196209
 TI Cloning of the **cyclin A1** genomic structure and
 characterization of the **promoter** region. GC boxes are essential
 for cell cycle-regulated transcription of the **cyclin A1**
 gene.
 AU Muller C; **Yang R**; Beck-von-Peccoz L; Idos G; Verbeek W; Koeffler
 H P
 CS Division of Hematology/Oncology, Cedars-Sinai Research Institute/UCLA
 School of Medicine, Los Angeles, California 90048, USA..
 muellererc@CSMC.edu
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Apr 16) 274 (16) 11220-8.
 Journal code: HIV; 2985121R. ISSN: 0021-9258.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 OS GENBANK-AF124143
 EM 199905
 ED Entered STN: 19990601
 Last Updated on STN: 19990601
 Entered Medline: 19990517

=> d 15 4 ab

L5 ANSWER 4 OF 4 MEDLINE
 AB **Cyclin A1** is a recently cloned cyclin with high level
 expression in meiotic cells in the testis. However, it is also frequently
 expressed at high levels in acute myeloid leukemia. To elucidate the
 regulation of **cyclin A1** gene expression, we cloned and
 analyzed the genomic structure of **cyclin A1**. It
 consists of 9 exons within 13 kilobase pairs. The TATA-less
promoter initiates transcription from several start sites with the
 majority of transcripts beginning within a 4-base pair stretch. A
 construct containing a fragment from -190 to +145 showed the highest
 transcriptional activity. Transfection of **cyclin A1**
promoter constructs into S2 Drosophila cells demonstrated that Sp1
 is essential for the activity of the **promoter**. Sp1, as well as
 Sp3, bound to four GC boxes between nucleotides -130 and -80 as observed
 by gel shift analysis. Mutations in two or more of the four GC boxes
 decreased **promoter** activity by >80%. The **promoter** was
 found to be cell cycle-regulated with highest activities found in late S
 and G2/M phase. Further analyses suggested that cell cycle regulation was
 accomplished by periodic repression of the GC boxes in G1 phase. Taken
 together, our data show that **cyclin A1**
promoter activity critically depends on four GC boxes, and members
 of the Sp1 family appear to be involved in directing expression of
cyclin A1 in both a tissue- and cell cycle-specific
 manner.

L2 ANSWER 1 OF 1 GENBANK.RTM. COPYRIGHT 2001

LOCUS (LOC): HSU66838 GenBank (R)
GenBank ACC. NO. (GBN): U66838
CAS REGISTRY NO. (RN): 184660-15-9
SEQUENCE LENGTH (SQL): 1743
MOLECULE TYPE (CI): mRNA; linear
DIVISION CODE (CI): Primates
DATE (DATE): 18 Mar 1997
DEFINITION (DEF): **Human cyclin A1** mRNA,
complete cds.
SOURCE: human.
ORGANISM (ORGN): Homo sapiens
Eukaryotae; mitochondrial eukaryotes; Metazoa;
Chordata; Vertebrata; Eutheria; Primates; Catarrhini;
Hominidae; Homo
NUCLEIC ACID COUNT (NA): 475 a 399 c 437 g 432 t
REFERENCE: 1 (bases 1 to 1743)
AUTHOR (AU): Yang, R.; Morosetti, R.; Koeffler, H.P.
TITLE (TI): Characterization of a second human cyclin A that is
highly expressed in testis and in several leukemic
cell lines
JOURNAL (SO): Cancer Res., 57 (5), 913-920 (1997)
OTHER SOURCE (OS): CA 126:262452
REFERENCE: 2 (bases 1 to 1743)
AUTHOR (AU): Yang, R.; Morosetti, R.; Koeffler, H.P.
TITLE (TI): Direct Submission
JOURNAL (SO): Submitted (13-AUG-1996) Hematology/Oncology,
Cedars-Sinai Research Institute UCLA School of
Medicine, 8700 Beverly Blvd., Los Angeles, CA 90048,
USA

FEATURES (FEAT):

Feature Key	Location	Qualifier
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